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(72)Inventor : WATANABE MASAHIKO
YASUHARA KATSUSHI

(54) MN-ZN-NI-BASED FERRITE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a soft ferrite having excellent magnetic stability, a high saturation flux density B_s at 100°C or higher, especially in the vicinity of 150°C, and hard to magnetically degrade at such high temperature providing some sacrifice in reduction of loss.

SOLUTION: This Mn-Zn-Ni-based ferrite comprises, in mol, 55.0 to 59.0% of iron oxide in terms of Fe_2O_3 , 0 to 15.0% of zinc oxide in terms of ZnO, 2.0 to 10.0% of nickel oxide in terms of NiO, as main components, and the rest Mn-Zn-Ni-based ferrite containing manganese oxide(MnO), which is constituted in a manner that δ value (amount of cation defect) in the following compositional formula (1) of the ferrite is ≤ 0.0025 : $(Zn_{2+}, Ni_{2+}, Mn_{2+}, Mn_{3+}, Fe_{2+}, Fe_{3+})_3O_{4+\delta}$ (1), wherein relations of $a+b+c+d+e+f=3$ and $\delta=a+b+c+(3/2)d+e+(3/2)f-4$ are satisfied.

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